

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
Purchasing Unit
425 W. Ottawa
Lansing, Michigan 48933

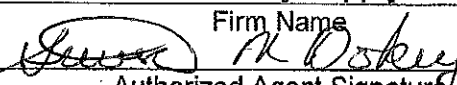
CONTRACT NO. 591B6600171
Between

THE DEPARTMENT OF TRANSPORTATION

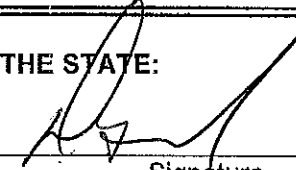
And

NAME & ADDRESS OF VENDOR Rathco Safety Supply Inc. 6742 Lovers Lane Portage, MI 49002 Email: steve@rathco.com		TELEPHONE (269) 323-0153 Contact: Steven M. Dokey
Galvanized Steel Delineator and Sign Posts-Michigan Department of Transportation		
CONTRACT PERIOD: From: April 6, 2016 To: April 5, 2019		
TERMS <div style="text-align: center;"><u>Net 45 days</u></div>		<div style="text-align: center;"><u>2, 1 Year Options</u></div>
MISCELLANEOUS INFORMATION: The terms and conditions of this Contract, including any applicable information from the vendor's proposal to RFP-059116B00069571 dated 2/8/2016 are attached. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence. Est. Contract Value: \$504,764.00		

FOR THE VENDOR:

Rathco Safety Supply Inc.
Firm Name

Authorized Agent Signature
STEVEN M DOKEY - MANAGER
Authorized Agent (Print or Type)
3/17/2016
Date

FOR THE STATE:


Signature
Demetrius A. Parker, P.E.
Name
Administrator, Michigan Department of Transportation
Title
4/05/2016
Date

STATE OF MICHIGAN

Contract I No. 591B6600171

Galvanized Steel Delineator and Sign Posts

EXHIBIT A STATEMENT OF WORK CONTRACT ACTIVITIES

BACKGROUND

This Contract is for Galvanized Steel Delineator and Sign Posts for the State of Michigan, Department of Transportation (MDOT). Exact quantities to be purchased are unknown, however the Contractor will be required to furnish all such materials and services as may be ordered during this contract period. Quantities specified, if any, are estimates based on prior purchases and the State is not obligated to purchase in these or any other quantities.

SCOPE

Contractor will provide galvanized steel delineator and sign posts are for use statewide (MDOT) direct forces.

REQUIREMENTS

1. General Requirements

1.1. Product Specifications

All commodities to be furnished hereunder shall conform to the specifications as noted in Exhibit C Pricing and Product Description Sheet of this Contract.

1.2. Warranties

Any posts not meeting State specifications will be replaced, no cost to the customer.

The State reserves the right to require additional warranties other than those identified by the Contractor in its response to this RFP.

1.3. Recall Requirements and Procedures

Any posts not meeting the State specification will be replaced, no cost to the customer

1.4. Quality Assurance Program

There are Mill Lab Tests on all steel runs.

1.5. Reserved

2. Service Levels

2.1. Time Frames

All Contract Activities must be delivered within 45 calendar days from receipt of order. The receipt of order date is pursuant to Section 2, Notices, of the Standard Contract Terms.

2.2. Delivery

Delivery will be expected within 45 calendar days upon date of order. Delivery will be made at:

7575 Crouner Dr.

Lansing, MI 48909

2.3. Reserved

2.4. Reserved

2.5. Reserved

2.6. Reserved

2.7. Reserved

2.8. Meetings

The State may request meetings as it deems appropriate.

3. Staffing

3.1. Contractor Representative

The Contractor must appoint a Product Representative)) individuals, specifically assigned to State of Michigan accounts, that will respond to State inquiries regarding the Contract Activities, answering questions related to ordering and delivery, etc. (the "Contractor Representative").

The Contractor must notify the Contract Administrator at least 14] calendar days before removing or assigning a new Contractor Representative.

The Contractor Representatives are:

Russell Rathburn, Product Representative #1
Steven Dokey, Product Representative #2

3.2. Reserved

3.3. Reserved

3.4. Reserved

3.5. Reserved

3.6. Reserved

3.7. Disclosure of Subcontractors

There will not be any subcontractors for this agreement.

3.8. Reserved

4. Pricing

4.1. Price Term

Pricing is firm for a 365 day period ("Pricing Period"). The first pricing period begins on the Effective Date. Adjustments may be requested, in writing, by either party and will take effect no earlier than the next Pricing Period.

4.2. Price Changes

Adjustments will be based on changes in actual Contractor costs. Any request must be supported by written evidence documenting the change in costs. The State may consider sources, such as the Consumer Price Index; Producer Price Index; other pricing indices as needed; economic and industry data; manufacturer or supplier letters noting the increase in pricing; and any other data the State deems relevant.

Following the presentation of supporting documentation, both parties will have 30 days to review the information and prepare a written response. If the review reveals no need for modifications, pricing will

remain unchanged unless mutually agreed to by the parties. If the review reveals that changes are needed, both parties will negotiate such changes, for no longer than 30 days, unless extended by mutual agreement.

The Contractor remains responsible for Contract Activities at the current price for all orders received before the mutual execution of a Change Notice indicating the start date of the new Pricing Period.

Bidder Response: We have secure a multi-year agreement.

5. Ordering

5.1. Authorizing Document

The appropriate authorizing document for the Contract will be a State Issued Purchase Order which must be approved by the Program Manager to order any deliverables under the Contract.

5.2 Order Verification

The Contractor must have internal controls, approved by MDOT to verify abnormal orders and to ensure that only authorized individuals place orders.

6. Delivery

6.1. Delivery Programs

The posts will be delivered via flatbed truck, quantity as outlined in Section 6.2.

6.2. Packaging and Palletizing

Truckload orders are F.O.B. Crowner Drive, supplier bears the burden of freight charges.

Posts to be shipped on truck with removable side racks and on minimum 4" stickers for unloading with a forklift. Shipment shall be banded. The posts will be steel banded in bundles of 100 each for the 7' posts and bundles of 50 each for the 11', 12', 13', 14', 16', 18', and 20' posts.

The Contractor shall provide packaging that most closely meets these packaging sizes. Packaging and containers, etc., shall be in accordance with supplier's commercial practice and shall meet the requirements of Department of Transportation (D.O.T.) and rail and motor carrier freight classifications in effect at time of shipment, which will permit application of the lowest freight rate.

7. Acceptance

7.1. Acceptance, Inspection and Testing

The State will accept orders after verifying the quantity, type, and condition of the packaging.

7.2. Reserved

8. Invoice and Payment

8.1. Invoice Requirements

All invoices submitted to the State must include: (a) date; (b) purchase order; (c) quantity; (d) description of the Contract Activities; (e) unit price; (f) shipping cost (if any); and (g) total price.

Invoices must be submitted to:

Mike Fiero
Michigan Department of Transportation
7575 Crowner Dr.
Lansing, MI 48909

8.2. Payment Methods

The State will make payment for Contract Activities via Electronic Funds Transfer (EFT).

8.3. Procedure

As required by MCL 18.1283, the Contractor must electronically register with the State at www.michigan.gov/cpexpress to receive EFT payments.

9. Reserved

10. Reserved

11. Reserved

12. Additional Requirements

12.1. Environmental and Energy Efficient Products

The Contractor must identify any energy efficient, bio-based, or otherwise environmental friendly products used in the products. Contractor must include any relevant third-party certification, including the verification of a United States department of agriculture certified bio based product label.

12.2. Hazardous Chemical Identification

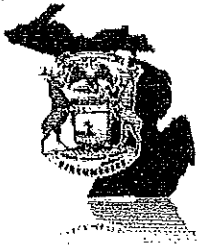
In accordance with the federal Emergency Planning and Community Right-to-Know Act, 42 USC 11001, *et seq.*, as amended, the Contractor must provide a Material Safety Data Sheet listing any hazardous chemicals, as defined in 40 CFR §370.2, to be delivered. Each hazardous chemical must be properly identified, including any applicable identification number, such as a National Stock Number or Special Item Number.

12.3. Mercury Content

Pursuant to MCL 18.1261d, mercury-free products must be procured when possible. The Contractor must explain if it intends to provide products containing mercury, the amount or concentration of mercury, and whether cost competitive alternatives exist. If a cost competitive alternative does exist, the Contractor must provide justification as to why the particular product is essential. All products containing mercury must be labeled as containing mercury.

12.4. Brominated Flame Retardants

The State prefers to purchase products that do not contain brominated flame retardants (BFRs) whenever possible. The Contractor must disclose whether the products contain BFRs



STATE OF MICHIGAN

STANDARD CONTRACT TERMS

This STANDARD CONTRACT ("Contract") is agreed to between the State of Michigan (the "State") and Rathco Safety Supply, Inc. ("Contractor"), a Michigan corporation]. This Contract is effective on April 6, 2016, 2016 ("Effective Date"), and unless terminated, expires on April 5, 2019.

This Contract may be renewed for up to two (2) additional one (1) year period(s). Renewal must be by written agreement of the parties], and will automatically extend the Term of this Contract.]

The parties agree as follows:

1. **Duties of Contractor.** Contractor must perform the services and provide the deliverables described in **Exhibit A – Statement of Work** (the "Contract Activities"). An obligation to provide delivery of any commodity is considered a service and is a Contract Activity.

Contractor must furnish all labor, equipment, materials, and supplies necessary for the performance of the Contract Activities, and meet operational standards, unless otherwise specified in Exhibit A.

Contractor must: (a) perform the Contract Activities in a timely, professional, safe, and workmanlike manner consistent with standards in the trade, profession, or industry; (b) meet or exceed the performance and operational standards, and specifications of the Contract; (c) provide all Contract Activities in good quality, with no material defects; (d) not interfere with the State's operations; (e) obtain and maintain all necessary licenses, permits or other authorizations necessary for the performance of the Contract; (f) cooperate with the State, including the State's quality assurance personnel, and any third party to achieve the objectives of the Contract; (g) return to the State any State-furnished equipment or other resources in the same condition as when provided when no longer required for the Contract; (h) not make any media releases without prior written authorization from the State; (i) assign to the State any claims resulting from state or federal antitrust violations to the extent that those violations concern materials or services supplied by third parties toward fulfillment of the Contract; (j) comply with all State physical and IT security policies and standards which will be made available upon request; and (k) provide the State priority in performance of the Contract except as mandated by federal disaster response requirements. Any breach under this paragraph is considered a material breach.

Contractor must also be clearly identifiable while on State property by wearing Identification issued by the State, and clearly identify themselves whenever making contact with the State.

2. **Notices.** All notices and other communications required or permitted under this Contract must be in writing and will be considered given and received: (a) when verified by written receipt if sent by courier; (b) when actually received if sent by mail without verification of receipt; or (c) when verified by automated receipt or electronic logs if sent by facsimile or email.

If to State:	If to Contractor:
Laura Dotson MDOT Purchasing 425 W. Ottawa Lansing, MI 48933 Dotsonl2@michigan.gov (517) 373-2134	Steven M Dokey 6742 Lovers Lane Portage, MI, 49002

3. **Contract Administrator.** The Contract Administrator for each party is the only person authorized to modify any terms of this Contract, and approve and execute any change under this Contract (each a "Contract Administrator"):

State:	Contractor:
Laura Dotson MDOT Purchasing 425 W. Ottawa Lansing, MI 48933 Dotsonl2@michigan.gov (517) 373-2134	Russell Rathburn 6742 Lovers Lane Portage, MI 49002 rusty@rathco.com 269-323-0153

4. **Program Manager.** The Program Manager for each party will monitor and coordinate the day-to-day activities of the Contract (each a "Program Manager"):

State:	Contractor:
Gene Pline 7575 Crowner Dr. Lansing, MI 48909 PlineG2@michigan.gov 517- 930-7821	Russell Rathburn 6742 Lovers Lane Portage, MI 49002 rusty@rathco.com 269-323-0153

5. **Performance Guarantee.** Contractor must at all times have financial resources sufficient, in the opinion of the State, to ensure performance of the Contract and must provide proof upon request. The State may require a performance bond (as specified in Exhibit A) if, in the opinion of the State, it will ensure performance of the Contract.
6. **Insurance Requirements.** Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations <u>Deductible Maximum:</u> \$50,000 Each Occurrence	Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0.
Automobile Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	Contractor must have their policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds; and (2) include Hired and Non-Owned Automobile coverage.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	

If any of the required policies provide claims-made coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Contract Activities; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Contractor must: (a) provide insurance certificates to the Contract Administrator, containing the agreement or purchase order number, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required Insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

7. **Reserved.**

8. **Reserved.**

9. **Independent Contractor.** Contractor is an independent contractor and assumes all rights, obligations and liabilities set forth in this Contract. Contractor, its employees, and agents will not be considered employees of the State. No partnership or joint venture relationship is created by virtue of this Contract. Contractor, and not the State, is responsible for the payment of wages, benefits and taxes of Contractor's employees and any subcontractors. Prior performance does not modify Contractor's status as an independent contractor. Contractor hereby acknowledges that the State is and will be the sole and exclusive owner of all right, title, and interest in the Contract Activities and all associated intellectual property rights, if any. Such Contract Activities are works made for hire as defined in Section 101 of the Copyright Act of 1976. To the extent any Contract Activities and related intellectual property do not qualify as works made for hire under the Copyright Act, Contractor will, and hereby does, immediately on its creation, assign, transfer and otherwise convey to the State, irrevocably and in perpetuity, throughout the universe, all right, title and interest in and to the Contract Activities, including all intellectual property rights therein.
10. **Subcontracting.** Contractor may not delegate any of its obligations under the Contract without the prior written approval of the State. Contractor must notify the State at least 90 calendar days before the proposed delegation, and provide the State any information it requests to determine whether the delegation is in its best interest. If approved, Contractor must: (a) be the sole point of contact regarding all contractual matters, including payment and charges for all Contract Activities; (b) make all payments to the subcontractor; and (c) incorporate the terms and conditions contained in this Contract in any subcontract with a subcontractor. Contractor remains responsible for the completion of the Contract Activities, compliance with the terms of this Contract, and the acts and omissions of the subcontractor. The State, in its sole discretion, may require the replacement of any subcontractor.
11. **Staffing.** The State's Contract Administrator may require Contractor to remove or reassign personnel by providing a notice to Contractor.
12. **Background Checks.** Upon request, Contractor must perform background checks on all employees and subcontractors and its employees prior to their assignment. The scope is at the discretion of the State and documentation must be provided as requested. Contractor is responsible for all costs associated with the requested background checks. The State, in its sole discretion, may also perform background checks.
13. **Assignment.** Contractor may not assign this Contract to any other party without the prior approval of the State. Upon notice to Contractor, the State, in its sole discretion, may assign in whole or in part, its rights or responsibilities under this Contract to any other party. If the State determines that a novation of the Contract to a third party is necessary, Contractor will agree to the novation and provide all necessary documentation and signatures.
14. **Change of Control.** Contractor will notify, at least 90 calendar days before the effective date, the State of a change in Contractor's organizational structure or ownership. For purposes of this Contract, a change in control means any of the following: (a) a sale of more than 50% of Contractor's stock; (b) a sale of substantially all of Contractor's assets; (c) a change in a majority of Contractor's board members; (d) consummation of a merger or consolidation of Contractor with any other entity; (e) a change in ownership through a transaction or series of transactions; (f) or the board (or the stockholders) approves a plan of complete liquidation. A change of control does not include any consolidation or merger effected exclusively to change the domicile of Contractor, or any transaction or series of transactions principally for bona fide equity financing purposes.

In the event of a change of control, Contractor must require the successor to assume this Contract and all of its obligations under this Contract.

15. **Ordering.** Contractor is not authorized to begin performance until receipt of authorization as identified in Exhibit A.

16. **Acceptance.** Contract Activities are subject to inspection and testing by the State within 30 calendar days of the State's receipt of them ("State Review Period"), unless otherwise provided in Exhibit A. If the Contract Activities are not fully accepted by the State, the State will notify Contractor by the end of the State Review Period that either: (a) the Contract Activities are accepted, but noted deficiencies must be corrected; or (b) the Contract Activities are rejected. If the State finds material deficiencies, it may: (i) reject the Contract Activities without performing any further inspections; (ii) demand performance at no additional cost; or (iii) terminate this Contract in accordance with Section 23, Termination for Cause.

Within 10 business days from the date of Contractor's receipt of notification of acceptance with deficiencies or rejection of any Contract Activities, Contractor must cure, at no additional cost, the deficiency and deliver unequivocally acceptable Contract Activities to the State. If acceptance with deficiencies or rejection of the Contract Activities impacts the content or delivery of other non-completed Contract Activities, the parties' respective Program Managers must determine an agreed to number of days for re-submission that minimizes the overall impact to the Contract. However, nothing herein affects, alters, or relieves Contractor of its obligations to correct deficiencies in accordance with the time response standards set forth in this Contract.

If Contractor is unable or refuses to correct the deficiency within the time response standards set forth in this Contract, the State may cancel the order in whole or in part. The State, or a third party identified by the State, may perform the Contract Activities and recover the difference between the cost to cure and the Contract price plus an additional 10% administrative fee.

17. **Delivery.** Contractor must deliver all Contract Activities F.O.B. destination, within the State premises with transportation and handling charges paid by Contractor, unless otherwise specified in Exhibit A. All containers and packaging becomes the State's exclusive property upon acceptance.

18. **Risk of Loss and Title.** Until final acceptance, title and risk of loss or damage to Contract Activities remains with Contractor. Contractor is responsible for filing, processing, and collecting all damage claims. The State will record and report to Contractor any evidence of visible damage. If the State rejects the Contract Activities, Contractor must remove them from the premises within 10 calendar days after notification of rejection. The risk of loss of rejected or non-conforming Contract Activities remains with Contractor. Rejected Contract Activities not removed by Contractor within 10 calendar days will be deemed abandoned by Contractor, and the State will have the right to dispose of it as its own property. Contractor must reimburse the State for costs and expenses incurred in storing or effecting removal or disposition of rejected Contract Activities.

19. **Warranty Period.** The warranty period, if applicable, for Contract Activities is a fixed period commencing on the date specified in Exhibit A. If the Contract Activities do not function as warranted during the warranty period the State may return such non-conforming Contract Activities to the Contractor for a full refund.

20. **Terms of Payment.** Invoices must conform to the requirements communicated from time-to-time by the State. All undisputed amounts are payable within 45 days of the State's receipt. Contractor may only charge for Contract Activities performed as specified in Exhibit A. Invoices must include an itemized statement of all charges. The State is exempt from State sales tax for direct purchases and may be exempt from federal excise tax, if Services purchased under this Agreement are for the State's exclusive use. Notwithstanding the foregoing, all prices are inclusive of taxes, and Contractor is responsible for all sales, use and excise taxes, and any other similar taxes, duties and charges of any kind imposed by any federal, state, or local governmental entity on any amounts payable by the State under this Contract.

The State has the right to withhold payment of any disputed amounts until the parties agree as to the validity of the disputed amount. The State will notify Contractor of any dispute within a reasonable time.

Payment by the State will not constitute a waiver of any rights as to Contractor's continuing obligations, including claims for deficiencies or substandard Contract Activities. Contractor's acceptance of final payment by the State constitutes a waiver of all claims by Contractor against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still disputed.

The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at <http://www.michigan.gov/cpexpress> to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Without prejudice to any other right or remedy it may have, the State reserves the right to set off at any time any amount then due and owing to it by Contractor against any amount payable by the State to Contractor under this Contract.

21. **Liquidated Damages.** Liquidated damages, if applicable, will be assessed as described in Exhibit A.
22. **Stop Work Order.** The State may suspend any or all activities under the Contract at any time. The State will provide Contractor a written stop work order detailing the suspension. Contractor must comply with the stop work order upon receipt. Within 90 calendar days, or any longer period agreed to by Contractor, the State will either: (a) issue a notice authorizing Contractor to resume work, or (b) terminate the Contract or purchase order. The State will not pay for Contract Activities, Contractor's lost profits, or any additional compensation during a stop work period.
23. **Termination for Cause.** The State may terminate this Contract for cause, in whole or in part, if Contractor, as determined by the State: (a) endangers the value, integrity, or security of any location, data, or personnel; (b) becomes insolvent, petitions for bankruptcy court proceedings, or has an involuntary bankruptcy proceeding filed against it by any creditor; (c) engages in any conduct that may expose the State to liability; (d) breaches any of its material duties or obligations; or (e) fails to cure a breach within the time stated in a notice of breach. Any reference to specific breaches being material breaches within this Contract will not be construed to mean that other breaches are not material.

If the State terminates this Contract under this Section, the State will issue a termination notice specifying whether Contractor must: (a) cease performance immediately, or (b) continue to perform for a specified period. If it is later determined that Contractor was not in breach of the Contract, the termination will be deemed to have been a Termination for Convenience, effective as of the same date, and the rights and obligations of the parties will be limited to those provided in Section 24, Termination for Convenience.

The State will only pay for amounts due to Contractor for Contract Activities accepted by the State on or before the date of termination, subject to the State's right to set off any amounts owed by the Contractor for the State's reasonable costs in terminating this Contract. The Contractor must pay all reasonable costs incurred by the State in terminating this Contract for cause, including administrative costs, attorneys' fees, court costs, transition costs, and any costs the State incurs to procure the Contract Activities from other sources.

24. **Termination for Convenience.** The State may immediately terminate this Contract in whole or in part without penalty and for any reason, including but not limited to, appropriation or budget shortfalls. The termination notice will specify whether Contractor must: (a) cease performance of the Contract Activities immediately, or (b) continue to perform the Contract Activities in accordance with Section 25, Transition Responsibilities. If the State terminates this Contract for convenience, the State will pay all reasonable costs, as determined by the State, for State approved Transition Responsibilities.
25. **Transition Responsibilities.** Upon termination or expiration of this Contract for any reason, Contractor must, for a period of time specified by the State (not to exceed 90 calendar days), provide all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the Contract Activities to continue without interruption or adverse effect, and to facilitate the orderly transfer of such Contract Activities to the State or its designees. Such transition assistance may include, but is not limited to: (a) continuing to perform the Contract Activities at the established Contract rates; (b) taking all reasonable and necessary measures to transition performance of the work, including

all applicable Contract Activities, training, equipment, software, leases, reports and other documentation, to the State or the State's designee; (c) taking all necessary and appropriate steps, or such other action as the State may direct, to preserve, maintain, protect, or return to the State all materials, data, property, and confidential information provided directly or indirectly to Contractor by any entity, agent, vendor, or employee of the State; (d) transferring title in and delivering to the State, at the State's discretion, all completed or partially completed deliverables prepared under this Contract as of the Contract termination date; and (e) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts (collectively, "Transition Responsibilities"). This Contract will automatically be extended through the end of the transition period.

26. **General Indemnification.** Contractor must defend, indemnify and hold the State, its departments, divisions, agencies, offices, commissions, officers, and employees harmless, without limitation, from and against any and all actions, claims, losses, liabilities, damages, costs, attorney fees, and expenses (including those required to establish the right to indemnification), arising out of or relating to: (a) any breach by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable) of any of the promises, agreements, representations, warranties, or insurance requirements contained in this Contract; (b) any infringement, misappropriation, or other violation of any intellectual property right or other right of any third party; (c) any bodily injury, death, or damage to real or tangible personal property occurring wholly or in part due to action or inaction by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable); and (d) any acts or omissions of Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable).

The State will notify Contractor in writing if indemnification is sought; however, failure to do so will not relieve Contractor, except to the extent that Contractor is materially prejudiced. Contractor must, to the satisfaction of the State, demonstrate its financial ability to carry out these obligations.

The State is entitled to: (i) regular updates on proceeding status; (ii) participate in the defense of the proceeding; (iii) employ its own counsel; and to (iv) retain control of the defense if the State deems necessary. Contractor will not, without the State's written consent (not to be unreasonably withheld), settle, compromise, or consent to the entry of any judgment in or otherwise seek to terminate any claim, action, or proceeding. To the extent that any State employee, official, or law may be involved or challenged, the State may, at its own expense, control the defense of that portion of the claim.

Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. An attorney designated to represent the State may not do so until approved by the Michigan Attorney General and appointed as a Special Assistant Attorney General.

27. **Infringement Remedies.** If, in either party's opinion, any piece of equipment, software, commodity, or service supplied by Contractor or its subcontractors, or its operation, use or reproduction, is likely to become the subject of a copyright, patent, trademark, or trade secret infringement claim, Contractor must, at its expense: (a) procure for the State the right to continue using the equipment, software, commodity, or service, or if this option is not reasonably available to Contractor, (b) replace or modify the same so that it becomes non-infringing; or (c) accept its return by the State with appropriate credits to the State against Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.
28. **Limitation of Liability.** The State is not liable for consequential, incidental, indirect, or special damages, regardless of the nature of the action.
29. **Disclosure of Litigation, or Other Proceeding.** Contractor must notify the State within 14 calendar days of receiving notice of any litigation, investigation, arbitration, or other proceeding (collectively, "Proceeding") involving Contractor, a subcontractor, or an officer or director of Contractor or subcontractor, that arises during the term of the Contract, including: (a) a criminal Proceeding; (b) a parole or probation Proceeding; (c) a Proceeding under the Sarbanes-Oxley Act; (d) a civil Proceeding involving: (1) a claim that might reasonably be expected to adversely affect Contractor's viability or financial stability; or (2) a governmental or public entity's claim or written allegation of fraud; or (e) a

Proceeding involving any license that Contractor is required to possess in order to perform under this Contract.

30. Reserved.

31. Reserved

32. **Non-Disclosure of Confidential Information.** The parties acknowledge that each party may be exposed to or acquire communication or data of the other party that is confidential, privileged communication not intended to be disclosed to third parties. The provisions of this Section survive the termination of this Contract.

- a. Meaning of Confidential Information. For the purposes of this Contract, the term "**Confidential Information**" means all information and documentation of a party that: (a) has been marked "confidential" or with words of similar meaning, at the time of disclosure by such party; (b) if disclosed orally or not marked "confidential" or with words of similar meaning, was subsequently summarized in writing by the disclosing party and marked "confidential" or with words of similar meaning; and, (c) should reasonably be recognized as confidential information of the disclosing party. The term "Confidential Information" does not include any information or documentation that was: (a) subject to disclosure under the Michigan Freedom of Information Act (FOIA); (b) already in the possession of the receiving party without an obligation of confidentiality; (c) developed independently by the receiving party, as demonstrated by the receiving party, without violating the disclosing party's proprietary rights; (d) obtained from a source other than the disclosing party without an obligation of confidentiality; or, (e) publicly available when received, or thereafter became publicly available (other than through any unauthorized disclosure by, through, or on behalf of, the receiving party). For purposes of this Contract, in all cases and for all matters, State Data is deemed to be Confidential Information.
- b. Obligation of Confidentiality. The parties agree to hold all Confidential Information in strict confidence and not to copy, reproduce, sell, transfer, or otherwise dispose of, give or disclose such Confidential Information to third parties other than employees, agents, or subcontractors of a party who have a need to know in connection with this Contract or to use such Confidential Information for any purposes whatsoever other than the performance of this Contract. The parties agree to advise and require their respective employees, agents, and subcontractors of their obligations to keep all Confidential Information confidential. Disclosure to a subcontractor is permissible where: (a) use of a subcontractor is authorized under this Contract; (b) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the subcontractor's responsibilities; and (c) Contractor obligates the subcontractor in a written contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor or any subcontractor may be required to execute a separate agreement to be bound by the provisions of this Section.
- c. Cooperation to Prevent Disclosure of Confidential Information. Each party must use its best efforts to assist the other party in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limiting the foregoing, each party must advise the other party immediately in the event either party learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Contract and each party will cooperate with the other party in seeking injunctive or other equitable relief against any such person.
- d. Remedies for Breach of Obligation of Confidentiality. Each party acknowledges that breach of its obligation of confidentiality may give rise to irreparable injury to the other party, which damage may be inadequately compensable in the form of monetary damages. Accordingly, a party may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies which may be available, to include, in the case of the State, at the sole election of the State, the immediate termination, without liability to the State, of this Contract or any Statement of Work corresponding to the breach or threatened breach.

- e. Surrender of Confidential Information upon Termination. Upon termination of this Contract or a Statement of Work, in whole or in part, each party must, within 5 calendar days from the date of termination, return to the other party any and all Confidential Information received from the other party, or created or received by a party on behalf of the other party, which are in such party's possession, custody, or control; provided, however, that Contractor must return State Data to the State following the timeframe and procedure described further in this Contract. Should Contractor or the State determine that the return of any Confidential Information is not feasible, such party must destroy the Confidential Information and must certify the same in writing within 5 calendar days from the date of termination to the other party.

33. Reserved

34. Reserved

35. Reserved

36. **Records Maintenance, Inspection, Examination, and Audit.** The State or its designee may audit Contractor to verify compliance with this Contract. Contractor must retain, and provide to the State or its designee and the auditor general upon request, all financial and accounting records related to the Contract through the term of the Contract and for 4 years after the latter of termination, expiration, or final payment under this Contract or any extension ("Audit Period"). If an audit, litigation, or other action involving the records is initiated before the end of the Audit Period, Contractor must retain the records until all issues are resolved.

Within 10 calendar days of providing notice, the State and its authorized representatives or designees have the right to enter and inspect Contractor's premises or any other places where Contract Activities are being performed, and examine, copy, and audit all records related to this Contract. Contractor must cooperate and provide reasonable assistance. If any financial errors are revealed, the amount in error must be reflected as a credit or debit on subsequent invoices until the amount is paid or refunded. Any remaining balance at the end of the Contract must be paid or refunded within 45 calendar days.

This Section applies to Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Contract Activities in connection with this Contract.

37. **Warranties and Representations.** Contractor represents and warrants: (a) Contractor is the owner or licensee of any Contract Activities that it licenses, sells, or develops and Contractor has the rights necessary to convey title, ownership rights, or licensed use; (b) all Contract Activities are delivered free from any security interest, lien, or encumbrance and will continue in that respect; (c) the Contract Activities will not infringe the patent, trademark, copyright, trade secret, or other proprietary rights of any third party; (d) Contractor must assign or otherwise transfer to the State or its designee any manufacturer's warranty for the Contract Activities; (e) the Contract Activities are merchantable and fit for the specific purposes identified in the Contract; (f) the Contract signatory has the authority to enter into this Contract; (g) all information furnished by Contractor in connection with the Contract fairly and accurately represents Contractor's business, properties, finances, and operations as of the dates covered by the information, and Contractor will inform the State of any material adverse changes; and (h) all information furnished and representations made in connection with the award of this Contract is true, accurate, and complete, and contains no false statements or omits any fact that would make the information misleading. A breach of this Section is considered a material breach of this Contract, which entitles the State to terminate this Contract under Section 23, Termination for Cause.
38. **Conflicts and Ethics.** Contractor will uphold high ethical standards and is prohibited from: (a) holding or acquiring an interest that would conflict with this Contract; (b) doing anything that creates an appearance of impropriety with respect to the award or performance of the Contract; (c) attempting to influence or appearing to influence any State employee by the direct or indirect offer of anything of value; or (d) paying or agreeing to pay any person, other than employees and consultants working for Contractor, any consideration contingent upon the award of the Contract. Contractor must immediately notify the State of any violation or potential violation of these standards. This Section applies to

Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Contract Activities in connection with this Contract.

39. **Compliance with Laws.** Contractor must comply with all federal, state and local laws, rules and regulations.
40. **Reserved.**
41. **Reserved.**
42. **Nondiscrimination.** Under the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, *et seq.*, and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, *et seq.*, Contractor and its subcontractors agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or mental or physical disability. Breach of this covenant is a material breach of this Contract.
43. **Unfair Labor Practice.** Under MCL 423.324, the State may void any Contract with a Contractor or subcontractor who appears on the Unfair Labor Practice register compiled under MCL 423.322.
44. **Governing Law.** This Contract is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Contract are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Contract must be resolved in Michigan Court of Claims. Contractor consents to venue in Ingham County, and waives any objections, such as lack of personal jurisdiction or *forum non conveniens*. Contractor must appoint agents in Michigan to receive service of process.
45. **Non-Exclusivity.** Nothing contained in this Contract is intended nor will be construed as creating any requirements contract with Contractor. This Contract does not restrict the State or its agencies from acquiring similar, equal, or like Contract Activities from other sources.
46. **Force Majeure.** Neither party will be in breach of this Contract because of any failure arising from any disaster or acts of god that are beyond their control and without their fault or negligence. Each party will use commercially reasonable efforts to resume performance. Contractor will not be relieved of a breach or delay caused by its subcontractors. If immediate performance is necessary to ensure public health and safety, the State may immediately contract with a third party.
47. **Dispute Resolution.** The parties will endeavor to resolve any Contract dispute in accordance with this provision. The dispute will be referred to the parties' respective Contract Administrators or Program Managers. Such referral must include a description of the issues and all supporting documentation. The parties must submit the dispute to a senior executive if unable to resolve the dispute within 15 business days. The parties will continue performing while a dispute is being resolved, unless the dispute precludes performance. A dispute involving payment does not preclude performance.
- Litigation to resolve the dispute will not be instituted until after the dispute has been elevated to the parties' senior executive and either concludes that resolution is unlikely, or fails to respond within 15 business days. The parties are not prohibited from instituting formal proceedings: (a) to avoid the expiration of statute of limitations period; (b) to preserve a superior position with respect to creditors; or (c) where a party makes a determination that a temporary restraining order or other injunctive relief is the only adequate remedy. This Section does not limit the State's right to terminate the Contract.
48. **Media Releases.** News releases (including promotional literature and commercial advertisements) pertaining to the Contract or project to which it relates must not be made without prior written State approval, and then only in accordance with the explicit written instructions of the State.
49. **Website Incorporation.** The State is not bound by any content on Contractor's website unless expressly incorporated directly into this Contract.

50. **Order of Precedence.** In the event of a conflict between the terms and conditions of the Contract, the exhibits, a purchase order, or an amendment, the order of precedence is: (a) the purchase order; (b) the amendment; (c) Exhibit A; (d) any other exhibits; and (e) the Contract.
51. **Severability.** If any part of this Contract is held invalid or unenforceable, by any court of competent jurisdiction, that part will be deemed deleted from this Contract and the severed part will be replaced by agreed upon language that achieves the same or similar objectives. The remaining Contract will continue in full force and effect.
52. **Waiver.** Failure to enforce any provision of this Contract will not constitute a waiver.
53. **Survival.** The provisions of this Contract that impose continuing obligations, including warranties and representations, termination, transition, insurance coverage, indemnification, and confidentiality, will survive the expiration or termination of this Contract.
54. **Entire Contract and Modification.** This Contract is the entire agreement and replaces all previous agreements between the parties for the Contract Activities. This Contract may not be amended except by signed agreement between the parties (a "Contract Change Notice").

STATE OF MICHIGAN

Galvanized Steel Delineator and Sign Posts

Contract No. 591B6600171

EXHIBIT C**PRICING AND PRODUCT DESCRIPTION SHEET**

Item Number	Commodity Number	Description	Estimated Contract Quantities	Units	Unit Price	Extended Price
1.	570-44	Posts, Steel (For delineator markers, mile markers, etc.) 7 foot steel posts for delineators, galvanized, nominal weight of 1.12 lbs. per linear foot Per MDOT 2012 Standard Specifications for Construction Section 919.04, 919.03D, and 907.03D	30,000	Each	5.58	167400
2.	570-44	Posts, Steel (For delineator markers, mile markers, etc.) 12 foot steel posts, sign, and galvanized, nominal weight of 3 lbs. Per	2000		23.16	4632

		Linear foot. Per the attached terms, conditions, the current MDOT 2012 Standard Specifications for Construction, section 919.04, 919.03D, and 907.03D.				
3.	570-44	Posts, steel (For delineator markers, mile markers, etc.) 14 foot steel posts, sign galvanized, and nominal weight of 3 lbs. Per linear foot. Per the attached terms, conditions, the current MDOT 2012 Standard Specification for Construction section 919.04, 919.03D, and 907.03D.	6000		27.02	162120
4.	570-44	Posts, steel (for	3000		30.88	92640

		delineator markers, mile markers, etc.) 16 Foot steel posts, sign, and galvanized, nominal weight of 3 lbs., Per linear foot. Per the attached terms, conditions, the current MDOT 2012 Standard Specification for Construction section 9.19.04 and 907.03D.				
5.	570-44	Posts, steel (for delineator markers, mile markers, etc.) 18 Foot steel posts, sign, and galvanized, nominal weight of 3 lbs., Per linear foot. Per the attached terms, conditions,	250		34.74	8685

		the current MDOT 2012 Standard Specification for Construction section 919.04, 919.03D, and 907.03D.				
6.	570-44	<p>Posts, steel (for delineator markers, mile markers, etc.)</p> <p>13 Foot steel posts, sign, and galvanized, nominal weight of 3 lbs., Per linear foot. Per the attached terms, conditions, the current MDOT 2012 Standard Specification for construction section 919.04, 919.03D, and 907.03D.</p>	1,100		25.09	27599

Minimum Order Charge if Applicable: \$_, No minimum order
Estimated 3 Year Contract Total\$ 504,764.00

Section 907. FENCING MATERIALS

907.01. General Requirements. Materials for fencing property, right-of-way, and other installations, must meet the requirements of this section.

907.02. Testing. Fencing materials testing will be in accordance with the specified ASTM, AASHTO or Department methods, as modified by this section.

The weights of fencing material include the weight of coating, unless otherwise specified.

Zinc coating at 1 ounce per square foot corresponds to a coating thickness of 1.7 mils.

907.03. Woven Wire Fence.

A. Fabric. Steel woven wire fabric must be zinc coated or aluminum coated.

1. **Zinc Coated.** Zinc coated fabric must meet the requirements of ASTM A 116, Design No. 1047-6-11, for Grade 60, Class 1 zinc coating.
2. **Aluminum Coated.** Aluminum coated fabric must meet the requirements of ASTM A 584, Design No. 1047-6-11.

B. Barbed Wire. Standard grade zinc coated or aluminum coated steel barbed wire must be composed of two strands of wire with four-point round barbs. Provide chain link fence grade barbed wire for use with chain link fence.

1. **Zinc Coated.** Zinc coated barbed wire must meet the requirements of ASTM A 121 and the following:
 - a. If the direction of the strand wire twist alternates between left and right, the strand wires must not untwist under a tensile force of 950 pounds for 12½ gauge wire, 850 pounds for 13½ gauge wire, or 750 pounds for 15½ gauge wire; and
 - b. Class 1 zinc coating is required for 12½ gauge steel wire, and Class 3 zinc coating is required for 13½ gauge wire and 15½ gauge wire.
2. **Aluminum Coated.** Aluminum coated barbed wire must meet the requirements of ASTM A 585, for Type 1 aluminum coated steel barbed wire with aluminum coated barbs.

C. Smooth Line Wire. Smooth line wire must be No. 9 gauge coated steel wire meeting the requirements of ASTM A 116, for Grade 60, Class 1 zinc-coated smooth line wire or ASTM A 584, for aluminum-coated smooth line wire.

D. Steel Posts. After fabrication, galvanize steel fence posts, braces, and fittings in accordance with ASTM A 123 and this subsection.

The weight of zinc coating per square foot of surface on posts and braces must average at least 2.00 ounces and no individual specimen may have less than 1.80 ounces of zinc coating per square foot, regardless of metal thickness. The Department will include the weight of zinc coating in the weights specified for posts and braces, but will deduct the weight of galvanizing greater than 4.00 ounces per square foot of surface from the post weight.

The Department will allow an alternate zinc and clear coat system for pipe sections. The exterior surface of the pipe section must have 0.90 ounce per square foot of zinc coating and a clear acrylic coating at least 0.30 mil thick. The interior surface of the pipe section must have 0.35 ounce per square foot of zinc coating or 0.30 mil zinc-rich organic coating and a zinc powder loading of at least 91 percent by weight.

Zinc coating must be applied in accordance with ASTM A 123. Determine coating weights and thicknesses in accordance with AASHTO M 181.

1. **Line Posts.** Steel for line posts must meet the requirements of ASTM A 702, for Type A or Type B. Line posts must be 7 feet long, ± 1 inch, with a nominal weight of 1.12 pounds per foot. Exclusive of the anchor plate, individual line posts must weigh 1.08 pounds per foot. Posts must be notched, studded, or have other Department-approved means of holding the fabric in place on the post. Provide each post with a Department-approved anchor plate and at least seven 11 gauge galvanized or aluminum coated wire clamps.
2. **End, Corner, Gate, Intersection, and Intermediate Braced Posts.** Steel angle sections, steel pipe, or steel tubing end, corner, gate, intersection, and intermediate braced posts must have an average weight within 10 percent of the specified weight per foot. Angle sections for posts and braces must meet the physical requirements of ASTM A 36 or ASTM A 702, for Type A or Type B.

Provide the required fittings and braces with each post.

- a. **Posts.** End, corner, gate, intersection, and intermediate braced posts must be 8 feet long, ± 1 inch.

Angle sections must be nominal 2½ inch by 2½ inch by ½ inch. Pipe or tubing must be nominal 2-inch, (2.375 inch OD), weighing 3.650 pounds per foot.

- b. **Braces.** Angle section braces must be nominal 1¼ inch by 1¼ inch by ¼ inch (2 inch by 2 inch by ¾ inch). Steel pipe braces must be nominal 1½ inch, (1.900 inch OD), weighing 2.72 pounds per foot. Steel tubing braces must be nominal 1.750 inch OD weighing 3.13 pounds per foot.

Braces must be long enough to support the posts. Provide at least one brace with each end post or gate posts. Provide at least two braces with each corner post and each intermediate braced post. Provide at least three braces with each intersection post.

E. Wood Posts. Wood posts must meet the requirements of subsection 912.08.

F. Gates. Provide gates for woven wire fence of the width and height shown on the plans. Provide each gate with Department-approved hinges, latches and auxiliary braces to prevent sagging. Weld or fit to form a rigid and watertight frame. Use woven wire in accordance with subsection 907.03.A to fill gate frames.

907.04. Steel Chain Link Fence.

A. Fabric. Chain link fence fabric must be zinc coated steel fabric meeting the requirements of ASTM A 392, for Class 2 coating, aluminum coated steel fabric meeting the requirements of ASTM A 491, or polymer coated steel fabric meeting the requirements of ASTM F 668, as modified by this subsection.

Galvanize zinc coated fabric after weaving.

Polymer coated steel chain link fence fabric must meet ASTM F 668, Class 2a except that the steel core wire may be either hot-dipped zinc coated (galvanized) or aluminum coated (aluminized) prior to polymer coating. Both the metallic coating and the polymer coating must be applied before weaving. The minimum weight of metallic coating must conform to ASTM F 668, Class 2a for zinc galvanized, or ASTM A 817 for aluminum. Provide fabric height and polymer coating color as shown on the plans.

Provide steel chain link fence fabric with the following characteristics:

1. Mesh size of 2.0 inches, or as shown on the plans;

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2. Wire size of 9 gauge zinc coated, 9 gauge aluminum coated, or 10 gauge aluminum coated; and
3. Top and bottom selvages knuckled.

B. Tension Wire. Tension wire must meet the steel wire requirements of ASTM A 824 for Type I aluminum coating and Type II, Class 3, zinc coating.

As an alternative for tension wire coatings, the Contractor may use hot-dipped Type I aluminized or hot-dipped Type II, Class 1 galvanized, followed by a polymer coating. The polymer coating must meet the requirements for polymer coated steel chain link fence fabric and match the color of the polymer coated steel chain link fence fabric.

C. Posts for Fence and Gates. Fence posts and gate posts for chain link fence must be metallic coated steel meeting the requirements of Table 907-1 and Table 907-2.

Table 907-1 Posts and Rail for Steel Chain Link Fence				
Use	Fabric Height (in)	Diameter (a) (in)	Nominal Weight (lb/ft)	ASTM Steel Specification (b)
End, Corner, Angle, and Intermediate Braced Posts (c)	≤120	2 1/4 (2.875)	5.80	F 1083
		2 1/4 (2.875)	4.64	F 1043
		3 1/2 by 3 1/4 RF Corner (d)	5.10	F 1043
Line Posts	≤120	2 (2.375)	3.65	F 1083
		2 (2.375)	3.12	F 1043
		1 7/8 by 1 1/2 H-Section	2.72	F 1043
		2 1/4 by 1 1/2 H-Section	3.26	F 1043
		2 1/4 by 1 1/2 C-Section (c)	2.70	F 1043
		2 (2.375)	2.31	F 1043
	≤72	1 1/2 by 1 1/2 C-Section (c)	2.26	F 1043
		1 1/2 (1.900)	2.72	F 1083
	≤60	1 1/2 (1.660)	2.28	F 1043
		1 1/4 (1.660)	2.27	F 1083
Horizontal Rail	—	1 1/4 (1.660)	1.84	F 1043
		1 1/4 (1.660)	1.84	F 1043

a. Outside pipe diameter with nominal diameter given first; actual diameter in brackets.
b. ASTM F 1083 references are for standard weight (Schedule 40) pipe.
c. Posts for fencing on structures must be 2 in (2.875) nominal outside pipe diameter and must meet the requirements of either ASTM F 1083 (Schedule 40) or ASTM F 1043 (Group 1C) or as called for on the plans.
d. RF: Roll-Formed Sections.

Table 907-2 Pipe for Gate Posts and Frames				
Use	Gate Width (ft)	Diameter (a) (in)	Nominal Weight (lb/ft)	ASTM Steel Specification (b)
Gate Posts	≤6	2½ (2.875)	5.80	F 1083
		2½ (2.875)	4.64	F 1043
	7 – 13	3½ (4.000)	9.11	F 1083
		3½ (4.000)	7.65	F 1043
	14 – 18	6 (6.625)	18.97	F 1083
Gate Frames	≤6	1½ (1.660)	2.27	F 1083
		1½ (1.660)	1.40	F 1043
	7 – 18	1½ (1.900)	2.72	F 1083
		1½ (1.900)	2.28	F 1043
a. Outside pipe diameter with nominal diameter given first; actual diameter in parenthesis.				
b. ASTM F 1083 references are for standard weight (Schedule 40) pipe.				

The average weight per foot of metallic coated fence posts must be within ±10 percent of the required weight per foot. Posts must be at least 32 inches longer than the height of the fence fabric.

Steel posts for chain link fence must be coated with zinc or aluminum inside and outside, or polymer-coated posts in accordance with one of the following methods.

1. **Zinc Coating.** Apply zinc coating meeting the requirements of ASTM A 123 or ASTM A 653. Use the alternate zinc and clear coat system described in subsection 907.03.D for pipe sections only.

The weight of zinc coating on pipe sections must average at least 1.80 ounces per square foot of surface and at least 1.60 ounces per square foot of surface per specimen when tested in accordance with ASTM A 90.

For posts, other than pipe sections, the weight of zinc coating on each post must average at least 2.00 ounces per square foot of surface and at least 1.80 ounces per square foot of surface per specimen when tested in accordance with ASTM A 90.

2. **Aluminum Coating.** Use Type 2 aluminum to coat posts. The weight of aluminum coating on each post must average at least 0.75 ounces per square foot of surface and at least 0.70 ounces per square foot of surface per specimen when tested in accordance with ASTM A 428.

3. **Polymer Coating.** After metallic coating, coat exterior surfaces with extruded and adhered polymer coating. Match the color of the post

907.04

to the color of the polymer coated steel chain link fence fabric coating.

D. **Gates.** Provide gates for chain link fence as shown on the plans. Provide metallic-coated steel pipe gate frames in accordance with Table 907-2. The average weight per foot of the pipe for the gate frames must be within ± 10 percent of the required weight per foot. Use the same type and weight of coating required for posts.

Weld or fasten joints to form a rigid and watertight frame. Wire brush welded joints and paint with two coats of a Department-approved zinc-rich paint.

Provide gates with intermediate braces, and truss rods to prevent sagging, and provide Department-approved hinges, latches, keepers, and stops. Fill the gate frames with fabric meeting the same requirements as for the fence fabric.

Provide polymer coated gate frames the same as for metallic-coated gate frames, in accordance with Table 907-2. Apply polymer coating to gate frames, including hinges, latches, keepers, and stops. Match the color of the polymer coated gate frame to the color of polymer coated steel chain link fence fabric.

E. **Fence Fittings and Hardware.** Provide post caps, rail, or brace ends, tie wires and clips, tension and brace bands, tension bars, truss rods, barb arms, and other hardware, meeting the requirements of ASTM F 626 and the exceptions and additions specified in this subsection.

Bevel the ends of hog rings for fastening fabric to the tension wire to allow crimping.

Provide fittings made of malleable iron or pressed steel for fences and gates.

If using aluminum coated wire ties and clips, ensure the coating weighs at least 0.30 ounces per square foot of surface.

The Contractor may use flat aluminum alloy line post bands with an OD from 0.062 inch to 0.375 inch and with self locking ends to fasten fabric to posts with an OD no greater than 2.375 inches.

Use double twisted, No. 9 gauge, galvanized steel for fabric fasteners for structure fencing.

Polymer coated fence fittings and hardware must be as specified above. After metallic coating, coat exterior surfaces with extruded and adhered

907.05

polymer coating. Ensure the color of the polymer coating matches the color of the polymer coated steel chain link fence fabric.

907.05. High-Tensile Wire Fence.

A. **Wire.** High tensile wire must be 1½ gauge, Grade 200, with Class 3 zinc coating in accordance with ASTM A 854.

B. **Wood Posts.** Wood posts must be pressure treated and meet the requirements of subsection 912.08.

C. **Hardware.** Galvanize hardware in accordance with ASTM A 153.

907.06. Protective Fencing. Protective fencing must be orange-colored, high density polyethylene mesh fabric with a nominal 2 inch diamond design. Protective fencing must be 48 inches high and weigh at least 0.102 pounds per square foot.

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Section 919. PERMANENT TRAFFIC SIGN AND SUPPORT MATERIALS

919.01. General Requirements. Permanent traffic signs and sign support material must meet the requirements of the MDOT Sign Support Standard Plans and this section.

Cantilever, truss, breakaway column, and aluminum structure inspection must be in accordance with section 707 and this section.

919.02. Traffic Signs. The Department classifies signs by type of sign panel material and type of sign face, as follows:

Table 919-1 Sign Panel and Face Types		
Sign Panel		
Type	Material	Size Limits
I	Aluminum Extruded Sections	Height > 48 in or Width > 144 in
II	Plywood	Height = 48 in and Width = 24 in From Height ≥ 36 in and Width ≥ 36 in up to Height ≤ 48 in or Width ≤ 144 in
III	0.080 in Aluminum Sheet (a)	36 in by 36 in
IV	0.040 Aluminum Sheet (a)	Overlay
Sign Face		
Type	Background	Legend
A	Reflectorized	Reflectorized
B	Reflectorized	Non-reflectorized
C	Non-reflectorized	Reflectorized

a. Corners must be rounded on aluminum sheet signs

A. Sign Panel Material and Fabrication.

- Aluminum Extruded Sections.** Provide aluminum extruded sections in a variety of widths with plain butt-type edges for connecting to adjoining horizontal sections. Sections must be one-piece with no vertical splices and have a cross-sectional shape meeting the minimum requirements specified in Table 919-2. Sections must have at least a 0.125-inch nominal thickness. Exterior corners must have a radius of at least 0.040 inch.

Sign panel sections must be extruded aluminum alloy 6063-T6, meeting the requirements of ASTM B 221. Panel sections, after fabrication, must be flat to within 0.031 inch or less per foot of length and to within 0.004 inch or less per inch of width.

Degrease aluminum extruded sign panel sections in accordance with the sheeting manufacturer's recommendations. After degreasing, surface treating, and rinsing, maintain sign panels free of grease, oil, or other contaminants.

Table 919-2 Cross-Sectional Requirements for Extruded Aluminum Sign Sections for Type I Sign Panels						
Length of Sign Support Type	Moment of Inertia	Section Modulus	Elements of Cross Section			
			No Free Ends		One Free End	
			b/t	$\geq l/y$	b/t	$\geq l/y$
≤ 30 ft on Columns	$\geq 0.94 W$	$\geq 0.55 W$	8-50	56.0C	5-28	32.0A
≤ 20 ft on Cantilevers			>50	3.4D	>28	11.6B
≤ 30 ft on Trusses						

Note: b = the compression width of stiffener elements in inches.
t = the thickness of the stiffener element in inches.
I = moment of inertia of the sign section in inches⁴.
y = the distance from the neutral axis to the centroid of the compression width of the element.
W = the width of the sign section in feet.
A = $W/(63-b/t)$.
B = $1.0 \times 10^{-4} W(b/t)^2$.
C = $W/(111-b/t)$.
D = $1.0 \times 10^{-4} W(b/t)^2$.

Connect the sections horizontally with $\frac{3}{8}$ inch diameter stainless steel bolts, spaced as shown on the Sign Support Standard Plans. Section connections or sign-to-post connections must have no fasteners that project through the sign panel face.

If using a 6 inch plank, position the plank second from the bottom of the sign.

Before transporting sign panels, ensure the support angles and wide flanged shapes are shop connected and remain on the sign.

2. **Plywood.** Plywood sign panels must be $\frac{5}{8}$ inch thick and have a black or natural color overlay on both sides. Panels must meet the requirements of the U.S. Product Standard PS-1-83 for Group 1 wood species, Grade B-B veneer, exterior type, high-density overlaid plywood. Inner plies must meet the requirements of Section 3.8.1, "Crossband Gaps and Center Gaps" of the U.S. Product Standard PS-1-83. Inner plies must have no continuous core gaps, tunnels, holes, or through openings that travel longitudinally or transversely through the plies, as measured from the panel edge. Crossband gaps or center gaps allowed by the U.S. Product Standard PS-1-83 must be filled with a synthetic filler repair, in accordance with Section 3.3, "Synthetic Repairs" of the U.S. Product Standard PS-1-83. Smooth and seal edges with one coat of exterior oil base paint.

Do not make vertical splices in plywood signs. The Engineer will allow horizontal splices only for gore signs. Do not splice plywood sign panels, unless otherwise shown on the sign details. Do not

make horizontal splices through legends or symbols. Round the corners and remove burrs at corners and mounting holes.

Prepare the plywood high-density overlay surface for sheeting application by lightly abrading the surface with a product recommended by the sheeting supplier. Do not power sand. Wipe the surface with a solvent and allow to dry in accordance with the sheeting manufacturer's recommendations.

After preparing the plywood surface, ensure no grease, oil, or other contaminants come in contact with the surface.

3. **Aluminum Sheet.** Aluminum sheet for Type III and Type IV sign panels must meet the requirements of ASTM B 209 for aluminum alloy 6061-T6, 5052-H38, or 5154-H38.

Aluminum sheet for Type III sign panels must be fabricated from nominal 0.080 inch thick aluminum sheet with mill tolerance meeting the requirements of ASTM B 209. Aluminum sheet for Type IV overlay sign panels must be fabricated from at least nominal 0.040 inch thick aluminum sheet, at least 0.037 inch thick.

Round the corners and remove burrs at the corners and mounting holes.

Degrease the aluminum sheet in accordance with the sheeting manufacturer's recommendations. After degreasing, surface treating, and rinsing, maintain sign panels free of grease, oil, or other contaminants.

B. **Sign Face and Legend Material.**

1. **Reflective Sheeting Material.** Select reflective sheeting for permanent signs from the Qualified Products List. Provide sheeting meeting the requirements of ASTM D 4956 and the ASTM Types specified in Table 919-3, unless otherwise required.

Provide the Engineer with written certification that reflective sheeting meets the following requirements:

- a. Sheeting material on each sign is an approved product, obtained from the same sheeting manufacturer, and applied in accordance with the manufacturer's recommendations;
- b. Signs are manufactured in strict compliance with the sheeting manufacturer's requirements; and
- c. Each 145 foot length roll of reflective sheeting contains no splices.

Certification must include lot numbers, run numbers, shipping date, invoice number, stock number, and quantities of material for each sign shipment.

2. **Sheeting Application.** Fabricate and apply legends in accordance with the Michigan Standard Highway Signs Manual, or as shown on the plans.
3. **Direct Applied Reflective Legend.** Cut legends with a smooth, regular outline, free of ragged or torn edges, and with interior corners cut to $\frac{3}{16}$ inch $\pm \frac{1}{16}$ inch radius.

Apply legends in accordance with the reflective sheeting manufacturer's recommendations.

For Type I aluminum extruded sign sections, cut the legend components along each metal sign section joint after applying the legend.
4. **Non-Reflective Legend, Borders and Arrows.** If a black legend is required, it must be applied using ink, silkscreen method, or non-reflective sheeting. Black sheeting used for legend, borders, and arrows must be non-reflective material unless otherwise stated. Provide material and apply non-reflective legends, borders and arrows in accordance with the manufacturer's specifications.

C. **Sign Hardware.** Steel shapes, bars, and plates must meet the requirements of ASTM A 36, or Department-approved equal, and be hot-dip galvanized in accordance with ASTM A 123.

Bolts, nuts, washers, U-bolts, and straps must be stainless steel alloy meeting the requirements of ASTM A 320, for Class 1, Grade B8. Provide self-locking, nylon insert-type nuts meeting the requirements of ASTM A 320 and ASTM A 194 for Grade 8F. If using U-bolts formed from straight bar stock, ensure U-bolts are formed by cold working.

Aluminum alloy shapes and plates must meet ASTM B 308, for aluminum alloy 6061-T6.

Cast post clips must conform to ASTM B 108, for aluminum alloy 356.0-T6.

919.02

Table 919-3 Retroreflective Sign Sheeting Material Guidelines			
Sign Category	Type	Material Type	Color
Yellow Warning Signs	W-series (non school related), E13-1, E13-2, E11-1, OM-1, OM-2, OM-3	ASTM Type IX	Fluorescent Yellow
School Signs	S1-1, S4-3, S4-5, S4-5a, school portion of S5-1, W16-7p, W16-9p, W16-2, W16-2a	ASTM Type IX	Fluorescent Yellow Green
Freeway Guide Signs	White legends; borders; and arrows;	ASTM Type IX	White
Freeway Guide Signs	Background including M8 series signs	ASTM Type IV	Green, Brown, or Blue
Non Freeway Guide Signs	All	ASTM Type IV	White on Green, Brown or Blue
Regulatory Signs	Stop, Yield, parking, black on white signs	ASTM Type IV	—
Route Markers	—	ASTM Type IX	—

919.03. Delineators. Fabricate reflectors for delineators from plastic material or reflective sheeting material, as shown on the plans. Provide the Engineer a copy of the manufacturer's certification that reflectors and posts meet the requirements of this subsection.

A. Plastic Reflectors. Reflectors for mounting on rigid post must consist of a round, clear, and transparent plastic lens, with a back fused to the lens, under heat and pressure, around the perimeter to form a unit sealed against dust, water, and vapor. The unit must have a central mounting hole and the lens must have a nominal reflecting area of 7 square inches. The lens must have a smooth outside surface and an inside configuration which provides "cube-corner" retro-reflection. The manufacturer's trademark must be legibly molded into the face of the lens.

Plastic reflectors must have plastic or aluminum housing. An aluminum or plastic grommet with an inside diameter of $\frac{3}{16}$ inch must be expanded within the reflector mounting hole and flanged. The Contractor may use plastic reflector housing consisting of acrylonitrile butadiene styrene (ABS) plastic meeting the requirements of ASTM D 3965 with a tensile strength of at least 6,500 psi.

- Optical Performance.** At least 90 percent of the reflectors tested must meet or exceed the values specified in Table 919-4 for the required color. One hundred percent of the reflectors tested must meet or exceed 80 percent of the values specified.

Table 919-4 Specific Intensity (SI) of Plastic Reflectors for Delineators					
SI candelas/foot-candle					
Color	Type	Divergence Angle 0.1 degree		Divergence Angle 0.2 degree	
		Entrance Angle (degree)		Entrance Angle (degree)	
		0	20	0	20
Crystal or Silver	A	120	50	84	35
Yellow	A	71	28	50	20
Red	A	29	11	21	8

B. Reflective Sheeting Reflectors. Reflective sheeting for mounting on flexible posts must meet the material, color, and resistance to weathering requirements of ASTM D 4956 for Type IX flexible high-intensity retroreflective sheeting.

When reflective sheeting reflectors are specified, or allowed for used in lieu of plastic reflectors, use yellow (amber) sheeting in place of yellow plastic reflectors and white (silver) sheeting in place of crystal plastic reflectors. Place a 3 inch by 6 inch piece of red reflective sheeting on the back side of the flexible post showing wrong-way movement for freeway ramps, as shown on the standard plans. Apply reflective sheeting in accordance with the manufacturer's specifications.

C. Mounting Hardware. Mounting hardware for plastic reflectors must consist of a solid aluminum pin with annular locking grooves and an aluminum crimp-type collar. Both the pin and the collar must meet the requirements of ASTM B 308, for aluminum alloy 6061.

The pin must be $\frac{3}{16}$ inch diameter, have a $\frac{7}{16}$ inch diameter bearing head, and have a grip length equal to the total thickness of material fastened together.

The collar must have a bearing diameter from $\frac{3}{8}$ inch to $\frac{7}{16}$ inch and be sized to fit the pin.

D. Posts. Provide steel or flexible plastic delineator posts, as shown on the plans. Steel delineator posts must have a nominal weight of 1.12 pounds per foot and meet the requirements of subsection 919.04 for steel posts. Select flexible plastic delineator posts from the Qualified Products List.

919.04. Steel Post Sign Supports and Square Tubular Steel Sign Supports. Steel post sign supports and square tubular steel sign supports, including sign posts, anchor sleeves, and anchor posts, must meet the requirements of ASTM A 702, for Type A or Type B.

919.04

A. Steel Post Sign Supports. The length of finished posts must be as shown on the plans. Posts must be straight with a smooth, uniform finish, free of cracks, flaws, injurious seams, laps, blisters, ragged and imperfect edges, or other defects affecting the strength, durability, or appearance of the posts. Cross-section and bolt hole diameter and spacing must meet the requirements shown on the sign support standard plans. The centers of the holes must coincide with the centerline of the posts. The punched bolt holes must provide a smooth, even sign post face. Holes and cutoff ends must be free of burrs.

After fabrication and hole punching, hot-dip galvanize steel posts in accordance with subsection 907.03.D.

Punched and coated posts must weigh at least 95 percent of the nominal weight shown on the plans.

B. Square Tubular Steel Sign Supports. Square tubular steel sign supports must meet the chemical, mechanical, and geometric properties of material used in the crash tests referenced in AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.

Sign posts, anchor sleeves, anchor posts, and connection hardware must be of the size and type shown on the Sign Support Standards.

Submit proof of compliance that the assembly was crash tested in accordance with AASHTO Standard Specifications for Luminaries and Traffic Signals. The proof of compliance must include a copy of the FHWA approval letter to the manufacturer, indicating that the FHWA interprets the crash test results as acceptable for use on federal-aid projects.

The sign post, anchor sleeve, and anchor post must be straight and have a smooth uniform finish, free from cracks and flaws or other defects affecting their strength or durability. All ends must be free from burrs and must be cut square to maintain telescoping characteristics.

Bolt holes of the diameter specified must be accurately spaced on all four sides of the sign post, anchor sleeve and anchor post. Holes must line up exactly opposite each other on opposing sides of the post in order to accommodate a bolt placed through two opposite sides. The center of the holes must coincide with the centerline of the sign post, anchor sleeve and anchor post.

The bolt holes must be punched so that the face of the sign post, anchor sleeve and anchor post will have a smooth even surface.

The sign post, anchor sleeve, and anchor post must be hot-dip galvanized, after fabrication and hole punching, in accordance with ASTM A 123 for Grade 65.

919.05. Sawed Wood Posts for Highway Signs. Sawed wood posts for highway signs must meet the requirements of section 912 and Sign Support Standard SIGN-210.

919.06. Breakaway Column Sign Supports. Structural steel for column sign supports and bolts, nuts, and washers for the structural steel joints must meet the requirements of Sign Support Standard SIGN-220.

Shims must be fabricated from brass shim stock or brass strip meeting the requirements of ASTM B 36, for copper alloy UNS No. C26000, half-hard rolled temper, or fabricated from galvanized sheeting meeting the requirements of ASTM A 526, for Coating Designation G 90.

Galvanizing runs or beads must be removed from contact surfaces of columns, plates, and washers.

Breakaway column sign supports must be welded and galvanized and must be within the dimension tolerances specified by subsection 919.07.

919.07. Cantilever Sign Supports.

A. Types E and J. Pipe for the vertical poles of types E and J supports, and horizontal arms of type E supports, must meet the requirements of ASTM A 53 for Grade B, Type E, or Type S steel pipe or the requirements of API 5L for Grade X42 to X52.

Pipe for the horizontal arms of type J, must meet the requirements of ASTM A 500, Grade B or the requirements of ASTM A 519-4140 annealed.

Gusset, flange, and base plates must meet the requirements of ASTM A 36 for structural steel. Plates must be free of sharp edges and irregularities.

B. Castings. Pole top and end cap castings must meet the requirements of ASTM A 126 for Class A castings.

C. Bolts for Arm Connections. Galvanized high-strength steel bolts, nuts, and washers for connecting arm connection flanges must meet the requirements of subsection 906.06.

D. Dimension Tolerances. Dimensional tolerances for each type of commodity must meet the requirements of ASTM A 6 or the ASTM standard applicable to the required material.

919.07

E. **Welding.** Weld in accordance with AWS D1.1, Structural Welding Code, "Steel" as amended by this section, or the contract.

F. **Galvanizing.** Galvanize steel anchor bolts for a length of at least 20 inches from the threaded end. Bolts, nuts, and washers must be hot-dip galvanized in accordance with ASTM A 153.

After welding assemblies and sign support attachments, blast clean base plates and welds to remove excess mill scale and welding slag. Blast clean other areas as directed by the Engineer. Hot-dip galvanize supports in accordance with ASTM A 123.

919.08. Truss Sign Supports. Before applying dead loads, trusses must be cambered so the ordinate is within the allowable tolerances at the center of the assembled truss for the span length and type shown on the plans. Ensure bearing surfaces fully contact each other in the relaxed position before tightening the flange bolts. The fabricator will determine the method of cambering the structure, with the Engineer's approval, to ensure the method does not induce stress into the truss.

A. **Materials.** Hollow structural tubing for horizontal arms must meet the requirements of ASTM A 500 for Grade B, the requirements of ASTM A 519-4140 annealed, or the requirements of API-5L for Grade X42. Safeguard hollow structural tubing against embrittlement in accordance with ASTM A 143.

Pipe for vertical poles must meet the requirements of ASTM A 53 for Grade B, Type E, or Type S steel pipe, or the requirements of API 5L for Grade X42 to X52.

Bar, plate, and rolled structural shapes must meet the requirements of ASTM A 36. Bars, plates, and shapes must be free of sharp edges and irregularities.

U-bolts and washers must meet the requirements of ASTM A 320, Grade B8, Class 1 stainless steel. Nuts must be self-locking nylon insert-type nuts meeting the requirements of ASTM A 320 for Grade B8F.

Nuts used in the upper clamp connection of the vertical end support assembly and on all U-bolts must be of the self-locking type.

Assemble truss unit flange connections and the alternate bolted, web-to-chord connection using galvanized high-strength steel bolts, nuts, and washers meeting the requirements specified by subsection 906.06.

B. **Welding.** Weld in accordance with AWS D1.1, Structural Welding Code, "Steel" as amended by section 919 or the contract.

C. Dimension Tolerances. Ensure cross sections, flatness, length, straightness, thickness, and camber of material, before and after fabrication, meet the tolerance requirements of ASTM A 6 and AWS D1.1.

D. Galvanizing. Truss units must be galvanized in accordance with ASTM A 123. Blast clean base plates and welds to remove excess mill scale and welding slag before galvanizing. Blast clean other areas as directed by the Engineer.

Provide safeguards meeting the requirements of ASTM A 384 and ASTM A 385 to obtain high quality galvanized coatings and minimize distortion and warpage during galvanizing.

Interconnect sections of fabricated pipe work or tube assemblies with open tee or miter joints and provide each enclosed section with a vent hole at each end to provide drainage for the molten zinc and to prevent hazard to personnel engaged in the galvanizing process.

Hot-dip galvanize individual pipe, tube, and bar members in accordance with ASTM A 123.

919.09. Overhead Lane Assignment Structures. Overhead lane assignment structures must meet the requirements of Sign Support Standard SIGN-760 and traffic signal typical plans.

919.10. Casings for Cantilever Drilled Piles. Casings for cantilever drilled piles must meet the requirements of ASTM A 252 for Grade 2 steel. Casings must be smooth, watertight, and capable of withstanding handling stresses and external subsurface pressures. Casing must have an inside diameter at least equal to the required shaft size.